recent theories were set forth, the new or little known instruments were shown and explained. Thus Sir Wm. Thomson's electrometer, and several experiments of Prof. Tyndall called forth the curiosity and attention of the assistants. But those amicable meetings are no longer sufficient; the necessity of a more formal gathering was felt, as well as of writing and publishing Transactions, that the notes and observations might not be completely lost. The members of the Institute of the physical section encouraged the new society by their warm approval.

On the 17th of January of the present year, in the Salle Gerson, an *annexé* of the Faculté des Sciences of Paris (*Sorbonne*), a number of physicists met. They accepted provisional statutes and elected a board. The provisional statutes proposed by a committee composed of MM. d'Almeida, Alfred Cornu, Gernez, Lissajous, Mascart, expressed, in a few articles, the basis of the new association.

The purpose of the society is to promote physics; it will have two sittings a month alternately with the Chemical Society, and will publish transactions that will be sent to the members. The members are divided into resident, non-resident, and honorary members, the last chosen by election from among the most eminent men in France and abroad. In the first year six will be elected, and two only in each following year.

The society will be glad to receive such gifts as will facilitate its work, and will inscribe in its Transactions the names of the givers.

The board is thus composed:—President, M. Fizeau, Member of the Institute; Vice-President, M. Bertin, Director of the Scientific Studies to the Superior Normal School; General Secretary, M. d'Almeida, Director of the new Journal of Physics; Secretary, M. Maurat, Professor of Physics to the Lycée St. Louis, of Paris; Vice-Secretary, M. Alfred Cornu, Professor of Physics to the Polytechnic School; Treasurer-Archivist, M. Philippon, Secretary of the Faculté des Sciences of Paris.

The venerable M. Becquerel, who, notwithstanding his 89 years, assisted at the meeting, in order to give by his presence a proof of his adhesion to the new society, has been designed, by acclamation, an honorary member.

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NOTES

PROF. OWEN has been appointed to a Civil Companionship of the Bath. If this is intended as an acknowledgment of Prof. Owen's services to science, it is not to the credit of Government that the honour was not conferred years ago.

PROF. TAIT'S Rede Lecture on Thermo-dynamics will be delivered to-morrow.

HITHERTO the London "Companies," whose "fatness" is notorious, have done little or nothing for the promotion of scientific researches or education. It is therefore with the greatest pleasure we record that the Fishmongers' Company have handsomely presented to Mr. W. K. Parker, F.R.S., so well known for his valuable researches on the shoulder-girdle and skull in vertebrated animals, the sum of 50*l.*, in addition to an allowance of 20*l.* a year for the next three years in order to enable him to pursue such parts of his work as relate to the Anatomy of Fish. This we certainly think a step in the right direction, and the Fishmongers' Company deserve all praise for having been so original and generous as to be the first to take it. We hope their award to Mr. Parker is only an earnest of what they will do in the future, and that their example will not be lost on the other notoriously wealthy companies of the City of London. A few thousands a year would never be missed out of their enormous revenues, and would not diminish by a single dainty the sumptuousness of their numerous feasts; whereas the amount of original and practically beneficial scientific work that could be done with the money, would yield them and the country generally a rich return. We daresay those who have the management of the funds of the various companies would be willing enough to divert a portion into scientific channels if they only knew how to go about it; the example of the Fishmongers' Company may afford them a hint. Moreover they need be at no loss, for there are plenty of eminent men of science competent and judicious enough to lend advice to the companies in this matter. Commerce, with which these companies are all more or less connected, owes much of its present gigantic dimensions and great prosperity to the discoveries and advances of science; gratitude and self-interest ought to urge our London merchants not to be indifferent to scientific progress. Let us also add, that their award to Mr. Parker is on a scale which shows a very slight acquaintance on the part of the City magnates with the value of time.

A FUSION has taken place between the local committee at Munich for erecting a statue to Justus von Liebig, and the committee appointed by the German Chemical Society at Berlin; the latter, in order to insure unity of action, giving way in the question as to where the statue should find its place. Notwithstanding the serious nature of the claims of Giessen, it was generally thought that the resting-place of the great chemist would unite the majority of votes of his admirers. A considerable number of leading German statesmen and foreign ambassadors have joined the committee, the full list of which will shortly be published.

FRESENIUS, who twenty-five years ago founded a school of chemistry at Wiesbaden, has celebrated the anniversary of its foundation amidst the festive concourse of his friends and pupils, and of the Government and learned societies of his country. A gloom was unfortunately cast over this event by the death of Mrs. Fresenius, which almost coincided with its celebration.

WE regret very much to announce the death of Emanuel Deutsch, at Alexandria. His premature death is a very great loss to Eastern scholarship.

THE Alexandra Palace, under new management, reopens on Saturday. We hope the managers will not neglect the interests of science.

WE recently announced that the French Society for the Encouragement of National Industry had awarded its grand medal to Sir Charles Wheatstone. The following is an extract from the report of the Committee on the Economic Arts:—While the kaleidophone of Sir Charles Wheatstone has been the point of departure of the method which permits sounds to be studied by the aid of the eye; while his researches on the qualities of sound, on the production of vowels, while the creation of his speaking machine, have elucidated many points in the theory of the voice; while his ingenious apparatus, illustrating the propagation and the combination of waves, has facilitated the understanding of these delicate phenomena, and contributed to throw light on the mechanism of the undulatory motions, his numerous researches on the applications of electricity, in which he has shown, at the same time, profound science and a genius marvellously inspired, occupy a great place in the history of the electric telegraph. It is he who first realised, under conditions really practicable, this admirable means of communication between men and between nations, and we ought not to forget that, more than once, he has come *personally* among us to prepare its organisation and stimulate success. The unanimous choice made by the committee of the economic arts and cordially ratified by the Council honours our society as much as him who is the object of it. We are happy to give, on this occasion, a testimony of sympathy to a nation in which science is held in such high esteem. Those among us who have had the good fortune to visit the scientific men of England in their own country have not forgotten that we have always received from them the most cordial and the most generous hospitality. In conferring on Sir Charles Wheatstone a reward rendered valuable by those who have already received it, the Council performs a pure act of justice, and acquits, at least for some among us, a debt of gratitude.

DR. VON DOLLINGER has been appointed President of the Bavarian Academy of Science and Conservator-General of Scientific Museums in Bavaria, which became vacant by the death of Baron Liebig. King Louis advised the doctor of his appointment by an autograph letter.

THE Institution of Civil Engineers hold a *conversazione* in the West Galleries of the International Exhibition, on Tuesday, the 27th inst.

MR. ARTHUR GAMGEE, M.D., F.R.S., Lecturer on Physiology at Surgeons Hall, Edinburgh, and Examiner in Forensic Medicine in the University of London, has been appointed Brackenbury Professor of Practical Physiology and Histology in Owens College, Manchester.

PROF. H. DE LACAZE-DUTHIERS, member of the French Institute, Professor of Zoology at the Faculté des Sciences of Paris, and Director of the Zoological Station of Roscoff, will accompany Commander Mouchez, in the *Narval*, that officer being engaged in completing the hydrographic map of the Algerian shores. The professor will make frequent soundings, and study the fauna of the Mediterranean. He will be assisted in the geological determinations by a distinguished young geologist, M. Vélain, Répétiteur of the Faculté of Sciences of Paris. The cruise will last five months. The ship left Lorient on May 1. M. de Lacaze-Duthiers will join them in July, at the termination of his lectures at the Faculté. Let us hope that these new explorations, under the guidance of an ardent, learned, and experienced man, will procure materials as valuable as those which were obtained by Agassiz, Wyville Thomson and others.

WE understand that there is a plan in hand for building a new museum at Vienna, to which the contents of the Imperial Zoological Cabinet, including the important collections of Natterer and other well-known naturalists, are to be transferred.

THE following telegram was received on Saturday at the Foreign-office from Colonel Stanton:—Alexandria, May 17, 1873.—The Egyptian Government has just received a despatch from the Governor-General of Southern Loudan, dated 15th March, reporting the arrival at Gondokoro of the reinforcements sent to Sir S. Baker, confirming the private intelligence recently forwarded to your lordship as to the safety of the party, and adding that in compliance with Sir S. Baker's demand, 200 soldiers, with a supply of salt and ammunition, had been sent on to him. Sir S. Baker had not reached the lake.

DR. PETERMANN has recently received a letter from Dr. Nachtigal, who in 1869 was sent out to Africa on a mission from the Emperor of Germany to the Sultan of Borneo. The letter is dated February 1872, and gives some brief details of Dr. Nachtigal's visits to the countries lying to the N.E. of Lake Tchad, the greater part of the region visited being new to European exploration. A most important discovery made by Dr. Nachtigal is that Bahr-el-Gazal, put down on some maps conjecturally as flowing into Lake Tchad, really flows out of that lake north-eastwards for about 300 miles. He has also discovered a range of mountains extending probably a distance of upwards of 800 miles from Tibesti to Darfur; one of the passes is at least 7,878 ft. above sea-level. At the date of the despatch of his letter, Dr. Nachtigal was about to undertake a journey into Bagirmi, the country lying to the south-east of Lake Tchad. It will thus be seen that this traveller is collecting materials which will add greatly to our knowledge of Central N. Africa.

A MESSAGE has been received by the *Daily Telegraph* from Mr. George Smith dated Mosul, May 19. "Since my last message," he says, "I have come upon numerous valuable inscriptions and fragments of all classes, including very curious syllabaries and bi-lingual records. Among them is a remarkable table of the penalties for neglect or infraction of the laws. But my most fortunate discovery is that of a broken tablet containing the very portion of the text which was missing from the Deluge tablet. Immense masses of earth and *débris* overlie whatever remains to be brought to light in this part of the great mound. Much time and large sums of money would be required to lay it open. I therefore await instructions from you and the Museum, as the season is closing." The *Daily Telegraph* and the British Museum have now an opportunity of showing that they have really at heart the advancement of historical research, and we are sure Mr. Smith's hint will be met by a hearty response. We feel confident that the liberality of the *Daily Telegraph* will be continued until Mr. Smith's researches are completed to his own satisfaction.

SOME time ago we were able to give authentic news of the safety of the Russian explorer of New Guinea, Dr. N. von Miklucho-Maclay, who had been reported dead in several newspapers. Dr. Maclay has himself sent a letter to Dr. Petermann, dated on board the Russian clipper, *Isumrud*, March 11, with a postscript dated Manilla, March 22, saying he is alive, though not very well, and was about to despatch to the St Petersburg Geographical Society an account of his exploration of New Guinea, his main object in visiting that country being to collect material for its ethnology. He intended to visit Luzon and the Sunda Islands, and then return to New Guinea.

AN important step has been taken in the carrying out of the decisions of the International Metric Commission which met at Paris in October last year. The form and mode of execution of the standard metre having been settled, the Commission entrusted to the French Section the manufacture and comparison of the new metres with the original standard in the Archives of France. We learn from *Les Mondes* that before proceeding to cast the definitive metres, the French Commission has thought it advisable to execute the first types, with which to test successively all the methods that will ultimately be applied to the definitive metres. This first experiment took place in the laboratory of M. H. Sainte-Claire Deville, who, with the assistance of M. Debray, has succeeded in obtaining the iridio-platinum alloy perfectly pure. The operation of casting this first international metre was considered of so much importance, that the President of the Republic and some of his Ministers, and other eminent Frenchmen, "assisted" at it. Nine kilogrammes of platinum, with one kilogramme of iridium, were melted under the action of an oxyhydrogen flame from a blow-pipe in three-quarters of an hour. The ingot was then cast, perfectly limpid, in a mould formed, like the furnace itself, of a block of carbonate of lime, whose interior walls alone were burned under the influence of the excessive temperature which was developed; consequently with this substance there is no risk of breakage. The metal was allowed to cool in the mould, and preserved its bright surface; in this condition it will be submitted to all the processes necessary to give it the definitive form which it ought to possess. The operation was considered, by all who witnessed it, as perfectly successful.

THE following further particulars with reference to the American Arctic exploring ship *Polaris*, Captain Hall, have been obtained by the correspondent of the *New York Herald*; they are dated Bay Roberts, *via* St. John's, N.F., into which the steamer *Tigress* had come, having on board nineteen survivors, including H. C. Tyson, assistant-navigator of Captain Hall's expedition. This party, which had been landed from the *Polaris*, were driven from her by a gale which burst her moorings on October 15, 1872, in latitude 72·35. When they last saw the *Polaris* she was under steam and canvas, making for a harbour on the east side of Northumberland Island. She had no boats left of the six which she brought with her from the port of New York. Two were lost in a northern expedition, two were landed on the ice with Captain Tyson's party, one was burnt as firewood to make water for the crew, and the other is on board the *Tigress*. The *Polaris* was in command of Captain Buddington, who had thirteen of a crew along with him, and a plentiful stock of provisions. She was making a good deal of water, but, as Captain Tyson informed the *Herald* correspondent, she was not more leaky than when he was on board all the previous fall and winter. Her bow was somewhat damaged, and it is the opinion of the survivors they will be unable to get clear until July, and even then, if the ship is unseaworthy, they would have to make new boats to effect an escape. On October 8, 1871, in latitude 81·38, longitude 61·44, Captain Hall died of apoplexy, and was buried on shore, where they erected a wooden cross to mark his grave. He had recently returned from a northern sledge expedition, in which he had attained the latitude of 82·16. In September 1871, the *Polaris* entered winter quarters, and left August 12, 1872. The ice was very heavy, and set in a southern direction. She was forced south, and so continued drifting till Captain Tyson and party were driven from her. The sledge-party crossed Kane's Polar Sea, which they pronounced to be a strait about 15 miles wide. There was an appearance of open water to the north.

THE Education Department propose to send on loan, to local schools in which it will be useful, what they call Travelling Apparatus for illustrating Instruction in Naval Architecture. The following is the list of articles included under that title:—1. Model of a half-midship section of an iron-clad ship, showing the mode of forming and combining the keel, frames, beams, &c., &c. 2. Ditto of an ordinary wooden ship. 3. Block-model, showing the lines used in laying off the fore-body of a ship. 4. Ditto, after-body. 5. Diagram showing the lines used in laying-off. These models and diagram are intended to be placed in the school or class-room for reference during the hours of study, in order that the students may better understand the nature of the work under consideration, and also to aid the teachers in illustrating their ideas when imparting instruction to their classes.

PROF. MARSH, in the current number of the *American Journal of Science and Art*, describes several new species of mammalia from the tertiary deposits of the Rocky Mountains region. *Orohippus agilis* is a new species of a genus intermediate between *Anchitherium* and *Palæotherium*, which has four functional digits, the first premolar tooth nearly as large as the second, no antorbital fossa, and an incomplete bony orbit. *Colonoceras*, a new genus, nearly allied to *Hyrachyus* (Leidy) and *Helaletes* (Marsh), is peculiar in having a pair of rugosities on the nasal bones, to support dermal horns. It was about the size of a sheep. Prof. Marsh separates the genus *Dinoceras* from *Tinoceras*, on account of the maxillary horn-cores being more anteriorly situated, and the parietal crests more elevated in the former, at the same time that the canine tusks are more compressed and trenchant. A new species of *Oreodon*, and two others of *Rhinoceros*, are also described.

A *résumé* of our knowledge, strikingly incomplete as it is, on the subject of sneezing, is given by Dr. Seguin in the third number of the new and excellent *Archives of Scientific and Practical Medicine*. The author's attention was drawn to the subject from his observing a fact, previously well known, that sneezing may be frequently stopped by pressing the fingers on the lips or sides of the nose. No new theory is given to explain the physiology of the phenomenon, and it is stated that naturally most of the air expired during a sneeze escapes through the nose, but that custom has brought about the discharge of a part through the mouth. This we cannot agree with, as it is difficult to believe that custom has much influence on so abrupt an act.

WE learn from *Ocean Highways* that Major Branfill, of the great Indian Trigonometrical Survey, has discovered that a peak of the Anamully Range attains a height of 8,837 ft. above the sea, 500 ft. higher than Dodabetta, in the Nilgiri Hills, hitherto supposed to be the loftiest peak in Southern India.

A FEW of the members of the Anthropological Institute, who did not approve of the proceedings at the annual meeting, have formed themselves into a separate society, under the name of the London Anthropological Society, with Dr. Charnock as president, and Captain R. F. Burton and Mr. Staniland Wake as vice-presidents. "This society," the prospectus says, "has been formed for the study of the science of anthropology in all its branches. The society, while adhering to the usual practice of conducting its transactions at meetings attended only by Fellows and gentlemen introduced by Fellows, contemplates placing the results of its investigations before the non-scientific portion of the community, by holding from time to time special meetings, to which the general public will be admitted."

ADDITIONS to the Brighton Aquarium during the past week:—One Alligator (*Alligator mississipensis*), 8 feet long, from South Carolina, purchased; one Australian Monitor (*Monitor gouldii*), purchased; 500 salmon, Great Lake trout, common trout, and hybrid fry (*Salmo salar, lacustris, et fario*), presented by Mr. Frank Buckland; larger and lesser Spotted Dog-fish (*Scyllium stellare et carnicula*); Skate-toothed Shark (*Mustelus vulgaris*); Picked Dog-fish (*Acanthias vulgaris*); Monk-fish (*Rhina squatina*), one specimen 5 feet long; Sting Ray *Trygon pastinaca*); Common Skate (*Raia batis*); Spotted Ray (*R. maculata*); Thornback (*R. clavata*); Three-spined Sticklebacks (*Gasterosteus spinulosus*); Bass (*Labrax lupus*); Streaked Gurnards (*Trigla lineata*); the Piper (*Trigla lyra*); Greater Weever (*Trachinus draco*); Lesser do. (*T. vipera*); John Dorée (*Zeus faber*); Dragonets (*Callionymus lyra*); Sand Smelts (*Atherina presbyter*); Grey Mullet (*Mugil capito*); Carp (*Cyprinus carpio*); Roach (*Leuciscus rutilus*); Minnow (*L. phoxinus*); Loach (*Nemachilus barbatula*); Tench (*Tinca vulgaris*); Herring (*Clupea harengus*); Sharp-nosed Eel (*Anguilla vulgaris*); Greater Pipe-fish *Syngnathus acus*); Snake Pipe-fish (*Nerophis æquoreus*); Branched Seahorse (*Hippocampus ramulosus*), Mediterranean; Squids, (*Loligo media*); Masked crabs (*Corystes cassivelaunus*); Spider Crabs (*Maia squinado*).

THE additions to the Zoological Society's Gardens during the past week include a Cashmere Monkey (*Macacus pelops*), presented by Rear-Admiral Davies; a Savannah Deer (*Cervus savannarum*) from South America, presented by Capt. Bennett; a Suricate (*Suricata zenik*) from South Africa, presented by Mr. A. Benyon; a Palm Squirrel (*Sciurus palmarum*) from India, presented by Mr. W. Lovegrove; a Mocking Bird (*Mimus polyglottis*) from North America, presented by Mr. P. Frank; an Indian Eryx (*Eryx johnii*), presented by Dr. Anderson; two pied Crow Shrikes (*Strepera graculina*) from Australia; an Ursine Colobus (*Colobus polycomus*) from Sierra Leone; a Hocheur Monkey (*Cercopithecus nictitans*) from West Africa; a Wandering Tree-pie (*Dendrocitta vagabunda*), two pied Mynahs (*Sternopastor contra*), and two rose-coloured Pastors (*Pastor roseus*) from India, purchased; two Hoffmann's Sloths (*Cholopus hoffmannii*) from Panama; two black Vultures (*Cathartes atratus*) from South America; a black-handed Spider Monkey (*Ateles melanochir*) from Central America, and a Crocodile (*Crocodilus americanus*) from Mexico, deposited.